

of temperature "as indicating a particular physical condition of that body while heat is the agency to which this condition is due," which is true enough, though it applies just as well to colour and light, convey information worthy of being recorded in formal language?

The "Elementary Study of Chemistry" is intended for much older students than either of the foregoing, and is an introduction to the serious study of chemistry as a separate science. The authors do not lay claim to any great originality in the treatment of their subject, and in this we must concur. At the same time, the fact that it resembles other elementary text-books does not detract from its merits. The authors have done their work thoughtfully and well. The matter is well arranged, the style is simple and concise, the paper and printing are good, and the illustrations are numerous and well executed.

As in the volume just referred to, we are soon confronted with definitions. "Physical changes," we are told, "are those which do not involve a change in the composition of the matter," but we are not told what "composition" means. "Chemical changes involve a change in the composition of matter." How would isomeric change be classified—say the conversion of ammonium cyanate into urea—according to this definition? Why attempt to define where there is no clear boundary, for it is not always easy to say where physical change ends and chemical change begins?

Apart from this we have nothing but praise for the book. The information is well up to date. There are suggestive chapters on "solutions," "chemical equilibrium," and the new learning; and if the teaching is a little didactic in places and leaves many obvious questions unanswered, it must be ascribed to the highly condensed treatment of the subject.

J. B. C.

#### MEDICAL SCIENCE.

- (1) *The Control of a Scourge, or, How Cancer is Curable.* By Charles P. Childe. Pp. ix+299. (London: Methuen and Co. [n.d.]) Price 7s. 6d. net.
- (2) *The Essential Similarity of Innocent and Malignant Tumours. A Study of Tumour Growth.* By Charles W. Cathcart. Pp. xii+79; thirty-eight plates. (Bristol: John Wright and Co.; London: Simpkin Marshall, Hamilton, Kent and Co., Ltd., 1907.) Price 9s. 6d. net.
- (3) *Guy's Hospital Reports.* Edited by F. J. Steward and Herbert French. Vol. lx., being vol. xlv. of the third series. Pp. 373. (London: J. and A. Churchill, 1906.)

(1) IN "The Control of a Scourge" Mr. Childe deals with the cancer problem particularly in relation to prevention and cure. Whether the subject could not have been dealt with in a quarter of the space with equally satisfactory results as regards the general public is a question, many of the details introduced being quite unnecessary for the average man or woman to know. What is really wanted is the broadest issue of a leaflet indicating the "danger signals" warning of the development of a cancerous

growth. The medical profession has naturally shrunk from doing this, savouring, as it might seem, of unprofessional advertising; but the importance of the subject warrants this being done, and there is a good precedent in the case of tuberculosis. Mr. Childe's main theme is that cancer usually indicates itself at an early stage by certain signs—"danger signals"—a lump, a sore, an abnormal discharge, &c., and that the public should be educated to understand the importance of these, so that they may seek advice at the earliest possible moment; and, this being so, cure would be possible in a much larger proportion of cases than at present. For cancer is at first a local disease; in four-fifths of the cases, at least, it is situated in regions eminently accessible for surgical operation, and complete removal while in the local stage would mean cure.

To the layman who wants to know all about cancer, and to the general practitioner who desires to be in a position to discuss the cancer problem with laymen, the book can be thoroughly recommended.

(2) The second work is for the professional reader, and is illustrated with some beautiful plates. It is, of course, admitted that there is no sharp line of demarcation between innocent and malignant growths, but we should take exception to the unqualified statement (p. 71) that "the same tumour may be at one time innocent and at another time malignant." Even now the minuter characters of the structure of neoplasms are by no means completely worked out, and it is surely previous to assert that tumours having an identity of structure may at one time be innocent and at another malignant. In the case of some of the infectious warts, &c., they should be regarded as infective granulomata rather than as true neoplasms. If not, it would be quite as logical to classify the granulomatous new formations of tubercule, syphilis, &c., as neoplasms.

(3) This volume of the Guy's Hospital reports contains a number (sixteen) of interesting papers, many of which have, however, been published elsewhere. Among others, Dr. F. Taylor discusses the chronic relapsing pyrexia of Hodgkin's disease, Drs. Bainbridge and Beddard discuss the mechanism of secretion by the renal tubules in the frog, and Dr. Buzzard and Mr. Allen describe observations on the effects produced by choline upon animals. The volume contains much matter of scientific value, and to old Guy's men the "school" news which is included will add to its interest.

R. T. H.

#### OUR BOOK SHELF.

*Ightham; the Story of a Kentish Village and its Surroundings.* By F. J. Bennet. Pp. viii+158; illustrated. (London: The Homeland Association, Ltd., 1907.) Price 7s. 6d. net.

THE area described lucidly in this volume is one of the most interesting in the country to the archæologist, the geologist, and the general student of nature. It comprises some sixteen square miles north of Tonbridge, lying between Maidstone and Sevenoaks, and under the unremitting observation of Mr. Benjamin Harrison, the White of Ightham, has probably been surveyed in greater detail than any other similar rural

area. Much of Mr. Harrison's material is embodied in the present volume, having been personally communicated to the author and the associated contributors.

The earlier chapters deal with the physical and geological features of the area, and in them the student will find ample material for extended surveys, made easier by the careful descriptions and directions given. Debatable points are at times introduced, but where the author's conclusions run counter to those of other authorities, the actual field evidence in support thereof is submitted.

The development of flint implements, with illustrations drawn from those found by Mr. Harrison, and others, in this area, and the several epochs of the Stone age are next discussed, the seventh chapter being devoted to a description of the megalithic monuments which are to be found in the district. It is to be regretted that, in regard to the latter, more definite results have not been secured. Stone circles, dolmens, and the remains of *viae sacrae* are mentioned in a general way as being possible sites of prehistoric worship, but although the district teems with objects which may prove of the greatest value to the student of early Britain, and is situated in a home county, no one appears to have yet succeeded in discovering and elucidating alignments such as the labours of Sir Norman Lockyer have established for somewhat similar monuments in Cornwall, Devon, &c. Yet we read on p. 47 of recent vandalism which bids fair to obliterate for ever these unique traces of the early inhabitants of the district. Surely the time has now arrived when a Government which carefully preserves records of ancient Babylon and Egypt should take effective steps to protect the only records we have of prehistoric Britain.

The remainder of the book deals with the general history of the Ightham district, and is pregnant with interest both for the historian and the general reader. The illustrations are from excellent photographs taken especially for this work, and one puts the book down with a deep feeling of regret that similar records for the scores of other interesting areas in which rural England abounds are as yet unwritten.

W. E. R.

*The Wit of the Wild.* By E. Ingersoll. Pp. xi+288; illustrated. (London: Unwin, 1907.) Price 6s. 6d. net.

As Mr. Ingersoll is always interesting and generally accurate, his writings may be commended to the attention of the reader in a manner which would not be safe in the case of all works on popular natural history. To recapitulate the titles of the two dozen articles which go to form the present volume will be unnecessary—more especially as some of them are of a rather cryptic nature—and it must accordingly suffice to mention that they cover a wide field, ranging from an account of the jelly-fish picturesquely named the "Portuguese man-of-war" to an inquiry whether animals can rightly be charged with suicidal propensities. All have appeared in the form of periodical literature, but they are none the worse for this, especially as many were first published in America. The article in which we have been most interested is one on the death-feigning instinct in the opossum—an instinct which in this particular case the author suggests has been inherited from long dead ancestors to the animal's own disadvantage. That the "collapse" which occurs when an opossum is suddenly seized is not due to some form of hysteria the author is firmly convinced; and if it be a death-feigning instinct designed for protection it certainly fails in its object, as the unhappy creature is mauled and done to death by quite a number of animals when in this condition.

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The reader should, however, peruse the chapter for himself, in order to form his own judgment, and having done this he will scarcely "skip" the remainder of a very interesting volume.

(1) *Technical Electricity.* By H. T. Davidge and R. W. Hutchinson. Pp. x+502. (London: University Tutorial Press, Ltd.) Price 4s. 6d.

(2) *Elementary Electrical Engineering.* By John H. Shaxby. Pp. vii+192. (London: Blackie and Son, Ltd.) Price 3s. net.

(1) This book is intended chiefly for the use of students of electrical engineering, and covers the London City and Guilds preliminary examination in electric lighting and power, and also the necessary technical work for stage ii. of the Board of Education examination in magnetism and electricity.

The question of the various units and systems of units has been given very careful attention, and the absolute and practical units are taken side by side so as to enable the student thoroughly to understand the relationships between them, and should help to mitigate the difficulties which generally arise when dealing with these units. The same idea is applied in the description of the construction of laboratory and practical measuring instruments, all the most modern forms which are in present-day use being carefully described, both as to their construction and action.

Examples of calibration and testing are fully given, but perhaps chapter xxiv., on "indoor wiring and jointing," is one of the best. This subject is so fully dealt with and clearly explained by diagrams showing the various systems of wiring that it is one of the chief chapters in the book, although it need not be taken up for either of the examinations mentioned above.

(2) Mr. Shaxby has written a book which he hopes will assist the home reader and evening-class student. The latter mostly consist of men who during the day are employed on electrical machinery, the theory of which is little known to them. Consequently, Mr. Shaxby has written his book in the simplest and clearest manner, and mathematics are avoided as much as possible. The first part of the book deals chiefly with the theoretical side of electrical work, and the question of primary batteries is very fully gone into.

Alternating-current machinery is so very largely employed in works and mills at the present day that it does not surprise us to find the author devoting three chapters to the subject of alternating currents and alternating-current machinery. The author gives an adequate but simple explanation of their chief properties, and also supplies illustrations of modern generators and motors.

J. L. M.

*Neinia, Denkversuche.* By O. K. Kremer. Pp. 420. (Vienna and Leipzig: E. Beyers, 1907.)

THIS book is not likely to appeal to many readers of NATURE. "Neinia," or *Nein*, represents the wish of the author to recognise any and every point of view as equally legitimate, although he personally professes to be an enemy of mystic metaphysics and a friend of materialism. He belongs to no particular philosophical school, but desires to think merely for the sake of thinking, without intending to prove any more or less unconsciously preconceived notions. This thinking cannot lead to any positive conclusion, and the book ends, characteristically enough, first with the sentence, "I believe nothing and therefore I believe everything," and then with the colophon, "U.S.W. *ad inf.*" The author claims for his book the advantage that one may begin to read it